

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date:

Region: Mooresville Regional Office
County: Catawba
NC Facility ID: 1800533
Inspector's Name: Bob Caudle
Date of Last Inspection: 03/14/2017
Compliance Code: 3 / Compliance - inspection

Facility Data Applicant (Facility's Name): International Cushioning Company, LLC - Hickory Facility Address: International Cushioning Company, LLC - Hickory 6005 North Carolina Highway 10 West Hickory, NC 28602 SIC: 3086 / Custom Compound Purchased Resins NAICS: 325991 / Custom Compounding of Purchased Resins Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			Permit Applicability (this application only) SIP: 02D .1806 NSPS: NESHAP: PSD: PSD Avoidance: 02Q .0317 NC Toxics: 02Q .0711 112(r): 02D .2100 Other: 02Q .0317				
Contact Data			Application Data				
Facility Contact Harry (Buddy) Bussey, III President (866) 311-9600 240 Boundary Road Marlboro, NJ 07746	Authorized Contact Harry (Buddy) Bussey, III President (866) 311-9600 240 Boundary Road Marlboro, NJ 07746	Technical Contact Harry (Buddy) Bussey, III President (866) 311-9600 240 Boundary Road Marlboro, NJ 07746	Application Number: 1800533.17A Date Received: 06/28/2017 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 09489/T07 Existing Permit Issue Date: 05/12/2014 Existing Permit Expiration Date: 03/31/2018				
Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2016	---	---	240.99	---	0.3239	0.4472	0.4472 [Styrene]
2015	---	---	271.17	---	0.2300	2.26	2.26 [Styrene]
2014	---	---	140.14	---	0.0700	2.98	2.98 [Styrene]
2013	---	0.1800	133.67	0.1100	0.0100	1.96	1.96 [Styrene]
2012	---	0.1800	129.29	0.1100	0.0500	1.80	1.80 [Styrene]
Review Engineer: Urva Patel Review Engineer's Signature: _____ Date: _____					Comments / Recommendations: Issue 09489/T08 Permit Issue Date: _____ Permit Expiration Date: _____		

1. Purpose of Application:

Currently, International Cushioning Company, LLC – Hickory holds Title V Permit No. 09489T07 with an expiration date of March 31, 2018. The primary purpose of this permit application is permit renewal with minor modification. The Title V renewal application (**Application No. 1800533.17A**) was received on June 28, 2017, which was at least nine months prior to the expiration date of the Title V permit. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

The following modifications are being made to the International Cushioning Company, LLC – Hickory permit:

- Second Polyethylene pellet silo with 4,800 cubic feet storage capacity (**ID No. IES-28**) is going to be added in this permit.
- Revision of Emission factor associated with sources (**ID Nos. ES-5, ES-20, and ES-22**).
- Relocation of an extruder (**ID No. ES-2**) and a re-processor (**ID No. ES-20**) from one of the current line to the Polyethylene line (**ID No. ES-26**).

2. Facility Description:

ICC manufactures packaging foam products and uses pentanes (n-pentane, isopentane, or blends) as a blowing agent in its process. As indicated in the compliance inspection report, the facility takes off-spec material (polystyrene) and removes all gas from it in the re-processors. This material is then combined with fresh polystyrene and other additives or color etc. as needed and processed in one of the production lines. Approximately 6 percent pentane is injected in the production lines as a blowing agent. The final products generated at the facility are expandable polystyrene (EPS) pellets or beads that when combined with water and heat are expanded into packaging peanuts and filler for beanbags. For most products, this expansion occurs at the customer locations, but ICC also produces a small amount of expanded polystyrene resin products onsite.

3. History / Background / Application Chronology:

Permit History Since Last Permit Renewal

April 1, 2013	Title V Air Permit No. 09489T06 issued. This permit includes renewal of Title V Air Permit
May 12, 2014	Title V Air Permit No. 09489T07 issued. This minor modification of Title V Air Permit includes the addition of a new polyethylene (PE) foam extruder with associated equipment.

Application Chronology

June 28, 2017	Received application for permit renewal.
July 10, 2017	Sent acknowledgement letter indicating that the application for permit renewal was administratively complete.
December 7, 2017	The facility (Mr. Michael Clea) sent revised Table 2.1 A as per relocation of ES-2 and ES-20 from one of the current lines to the ES-26 line.

4. Summary of Changes to the Existing Permit (Permit No. 09489T07):

Page No.	Section	Description of Changes
Cover Letter	N/A	<ul style="list-style-type: none">• Update cover letter for permit renewal application, permit numbers, dates, PSD increment statement and Chief name.
Permit Cover	N/A	<ul style="list-style-type: none">• Insert new issuance and complete application date and application number.
-	Insignificant Activity List	<ul style="list-style-type: none">• Installed second polyethylene pellet silo in insignificant activity which is combined with existing polyethylene pellet silo (ID No. IES-28) and revised description of ID No. IES-28

Page No.	Section	Description of Changes
3-7	Section 2	<ul style="list-style-type: none"> Changes include: <ul style="list-style-type: none"> Updating regulation references from “2D” and “2Q” to “02D” and “02Q” to be consistent with regulation nomenclature.
3	Section 1 – Table, 2.1 A	<ul style="list-style-type: none"> Relocation of an extruder (ID No. ES-2) and a re-processor (ID No. ES-20) from one of the current line to the Polyethylene line (ID No. ES-26)
4	2.1 A.1.b	<ul style="list-style-type: none"> Revised the emission factor associate with sources (ID Nos. ES-5, ES-20, and ES-22) from 0.030 lb VOC / lb expandable blown polystyrene to 0.0007 lb VOC / lb expandable blown polystyrene
8	Section 3	<ul style="list-style-type: none"> Section was revised from v.5 to current shell version 5.1 (08/03/2017). References to DENR were revised to DEQ

5. Compliance Status:

DAQ has reviewed the compliance status of this facility. During the most recent inspection conducted on March 14, 2017, Bob Caudle of the Mooresville Regional Office indicated that the facility appeared to be in compliance with all applicable requirements. Additionally, a signed Title V Compliance Certification (Form E5) indicating that the facility was in compliance with all applicable requirements was submitted with Application No. 1800533.17A on June 28, 2017.

Five-year Compliance History:

- The facility was inspected on March 14, 2017 and appeared to be in compliance with all applicable air quality regulations.
- The facility was inspected on March 21, 2016 and appeared to be in compliance with all applicable air quality regulations.
- The facility was inspected on April 6, 2015 and appeared to be in compliance with all applicable air quality regulations.
- The facility was inspected on February 25, 2014 and appeared to be in compliance with all applicable air quality regulations.
- The facility was inspected on November 30, 2013 and appeared to be in compliance with all applicable air quality regulations.

6. New/Modified Equipment/Changes in Emissions:

This is permit renewal with minor modification. It does not change any emissions. The facility is expected to be in continued compliance.

The following modifications are being made to the International Cushioning Company, LLC – Hickory permit:

- Second Polyethylene pellet silo – 4,500 cubic feet storage capacity (**ID No. IES-28**) is going to be added in this permit as an insignificant activity. Mr. Guy Lee sent Applicability determination email to Mr. Matthew J Wilson (Mooresville Regional Office) on June 4, 2016. It was approved on June 7, 2016 by Mr. Brian Bland.
- A former Second Polyethylene pellet silo – 4,500 cubic feet storage capacity (**ID No. IES-28**) replaced with Polyethylene pellet silo – 4,800 cubic feet storage capacity (**ID No. IES-28**). The new Polyethylene pellet silo is considered exempt from air permitting by 15A NCAC 02Q .0503(8).
- Relocation of an extruder (**ID No. ES-2**) and a re-processor (**ID No. ES-20**) from one of the current line to the Polyethylene line (**ID No. ES-26**) to allow the facility to meet changing customer needs.
- Revision of Emission factor associated with sources (**ID Nos. ES-5, ES-20, and ES-22**):
ICC has changed the raw material content for the expandable EPS process associated with sources (**ID Nos. ES-5, ES-20, and ES-22**). The input material formulation change has resulted in a reduction in the volume of Pentane gas which results in a reduction of VOC content. The current permit indicates an emission factor of 0.0300 lb-VOC/lb-expanded blown polystyrene processed. On February 7, 2017, performance of Laboratory testing of the modified material indicated actual VOC content of 0.0007 lb-VOC/lb-expanded

blown polystyrene processed. The test results of modified raw material content for the Expanded EPS process associated with sources (**ID Nos. ES-5, ES-20, and ES-22**) are included in this permit application.

7. Regulatory Review

International Cushioning Company, LLC - Hickory is subject to the following regulations. An extensive review for each applicable regulation is not included in this document, as the facility's status with respect to these regulations has not changed. The facility is expected to be in continued compliance.

2.1 Emission Sources and Control Devices Specific Limitations and Conditions:

A. Polystyrene pellet manufacturing process including:

- **Three EPS resin production lines (ID Nos. ES-1, ES-3 and ES-4)**
- **Two polystyrene re-processors (ID Nos. ES-5 and ES-22)**
- **Three EPS resin expanders (ID Nos. ES-7, ES-8 and ES-9)**

1. Applicable Regulatory Requirements:

- 15A NCAC 02D .1806: Control and Prohibition of Odorous Emissions (**State-Enforceable only**)
- 15A NCAC 02Q .0317: Avoidance Condition (for 15A NCAC 02D .0530, 15A NCAC 02D .1111)
- 15A NCAC 02Q .0711: Emission Rates Requiring a Permit (**State-Enforceable only**)

2. Change in this permit:

- Moved one EPS resin production line (**ID No. ES-2**) and one polystyrene re-processor (**ID No. ES-20**) with Polyethylene foam extruder with scrap reprocessing line (**ID No. ES-26**) to allow the facility to meet changing customer needs.

B. Polyethylene foam extruder with scrap reprocessing (ID No. ES-26)

One EPS resin production lines (ID No. ES-2)

One polystyrene re-processors (ID Nos. ES-20)

1. Applicable Regulatory Requirements:

- 15A NCAC 02Q .0317: Avoidance Condition (for 15A NCAC 02D .0530)
- 15A NCAC 02D .1806: Control and Prohibition of Odorous Emissions (**State-Enforceable only**)

2.2 Multiple Emission Sources Specific Limitations and Conditions:

A. Facility-wide affected sources

Applicable Regulatory Requirements:

- 15A NCAC 02Q .0317: Avoidance Condition (for MACT: 15A NCAC 02D .1111)
- 15A NCAC 02D .2100: Risk Management Program
- 15A NCAC 02Q .0711: Emission Rates Requiring a Permit (**State-Enforceable only**)
- 15A NCAC 02D .1806: Control and Prohibition of Odorous Emissions (**State-Enforceable only**)

8. NSPS, NESHAP/MACT, NSR/PSD, 112(r), CAM

NSPS

This facility is NOT subject to New Source Performance Standards (NSPS), 40 CFR 60. This permit renewal does not change this status.

NESHAP/MACT

This facility is a major source for HAPs emissions and is subject to major source MACTs. However, the facility is currently operating under facility-wide emission limits for hazardous air pollutants (HAPs) to avoid the applicability of major source Maximum Achievable Control Technology Standards. The permit limits emissions of any single HAP to less than 10 tons per year and to less than 25 tons per year for any combination of HAPs. These limitations establish this facility as a Title III minor facility. To ensure compliance, ICC is required to calculate HAP emissions monthly using consumption and HAP material content records. Specific recordkeeping and reporting requirements are also established. This permit renewal does not affect this status.

NSR/PSD

The facility is in Catawba County which is classified as an ozone Attainment area. International Cushioning Company, LLC - Hickory has accepted a limit of 250 tons of VOC emissions per consecutive 12-month period to avoid applicability of PSD. No changes to the existing PSD avoidance condition are required under this permit renewal.

- 15A NCAC 02Q .0317, Avoidance Conditions – The facility has accepted the following conditions to avoid applicability of 02D .0530, Volatile Organic Compounds:
 - Polystyrene pellet manufacturing process including: 4 EPS resin production lines, 3 polystyrene re-processors, and 3 EPS resin expanders:
Emissions of Volatile Organic Compounds (VOC) is limited to less than 250 tons per year.
 - Polyethylene foam extruder with scrap reprocessing:
Emissions of Volatile Organic Compounds (VOC) is limited to less than 250 tons per year.

112(r)

International Cushioning Company, LLC - Hickory is subject to the 112(r) “Prevention of Accidental Releases” requirements because it stores isopentane, isobutane and propane used in the EPS process in amounts greater than the applicability threshold.

As required under 112(r), the facility submitted an updated Risk Management Plan (RMP) to EPA pursuant to 40 CFR 68.190 on October 21, 2014. The 112(r)-permit condition was modified to account for the introduction of isobutane and propane onsite. When these substances are brought onsite, the facility may need to revise and update its RMP as required by 40 CFR 68.190(b)(2) through (b)(7). ICC sent revised and updated RMP to EPA on October 21, 2014. The facility must revise and update its RMP every five years thereafter. The permit condition has been updated to the most recent shell conditions.

Compliance Assurance Monitoring (CAM)

Pursuant to 40 CFR 64.2, the provisions of the Compliance Assurance Monitoring (CAM) rule are applicable to emission units that meet all the following criteria:

- Criteria #1: The unit is subject to an emission limitation AND uses a control device to achieve compliance with the limit;
- Criteria #2: The unit has pre-control potential emissions that are equal to or greater than 100% of the amount (in tpy) required for a source to be classified as a major source (i.e., 100 tpy of any criteria pollutant or 10 tpy of any HAP); and,
- Criteria #3: The unit is not exempt under 40 CFR 64.2(b).

The facility has no add-on control devices. Therefore, CAM is not applicable to this facility.

9. Facility-Wide Air Toxics:

The facility is currently subject to 2Q .0711 for styrene only. According to the permit review for Air Permit No. 09489R00,¹

¹ Jim Hafner (November 30, 2004).

styrene is emitted from the four resin lines (ID Nos. ES-1 through ES-4). The emission factor for styrene of 0.0005 lb-styrene/lb-resin was provided by the manufacturer (BASF) with the initial permit application in 2004. Based on this factor and the production rate of the resin lines, styrene emissions are expected to remain below its toxic permitting emission rate (TPER) of 2.7 pounds per hour. No changes are required under this permit renewal. The facility is expected to be in continued compliance.

10. Facility Emission Review:

There are no changes in potential emissions under this permit renewal. Actual emissions for 2012 through 2016 are reported. in the header of this permit review.

11. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above. Tennessee, South Carolina and Mecklenburg County-local program are an affected state and a local program within 50 miles of the facility.

12. Other Regulatory Considerations:

- NO application fee is required with this renewal application.
- A Professional Engineers Seal is NOT required with this renewal application.
- A zoning consistency determination is NOT required for this renewal application.
- A 30-day public notice and 45-day EPA review is required for this renewal application.

13. Recommendations/Conclusion:

TBD